

Title (en)
Image forming apparatus

Title (de)
Bilderzeugungsgerät

Title (fr)
Appareil de formation d'images

Publication
EP 0789287 B1 20030723 (EN)

Application
EP 97101493 A 19970130

Priority
JP 1789196 A 19960202

Abstract (en)
[origin: EP0789287A2] An image forming apparatus includes a photoreceptor drum (15) having a toner image formed on its surface, a transfer drum (11) having a dielectric layer (28), a semiconductive layer (27) and a conductive layer (26) arranged orderly, a power source section (32) applying a predetermined voltage to the conductive layer (26), and a ground roller (12) which is grounded and comes in contact with the surface of the dielectric layer (28) through a transfer paper (P). In addition, in the image forming apparatus, a foaming body having elastic property is used for the semiconductive layer (27), and a diameter of foams in the semiconductive layer (27) is controlled within the range of between 200 μ m and 400 μ m. Alternatively, the average micro-gap (which is obtained by equalization of a micro-gap formed between the semiconductive layer (27) and the dielectric layer (28)) may be controlled within the range of between 20 μ m and 50 μ m. Consequently, a stable electrostatic attraction of the transfer paper (P) to the transfer drum (11) is achieved, and unsatisfactory transfer of the toner image onto the transfer paper (P) is prevented. The image forming apparatus realizes an excellent image formation onto the transfer paper, and the arrangement capable of reduction of the manufacturing cost.

IPC 1-7
G03G 15/16

IPC 8 full level
G03G 15/01 (2006.01); **G03G 15/16** (2006.01)

CPC (source: EP US)
G03G 15/1685 (2013.01 - EP US); **G03G 2215/1614** (2013.01 - EP US)

Cited by
EP0811891A3

Designated contracting state (EPC)
DE GB

DOCDB simple family (publication)
EP 0789287 A2 19970813; **EP 0789287 A3 19980527**; **EP 0789287 B1 20030723**; CN 1097753 C 20030101; CN 1160231 A 19970924; DE 69723597 D1 20030828; DE 69723597 T2 20040513; JP H09212002 A 19970815; US 5771430 A 19980623

DOCDB simple family (application)
EP 97101493 A 19970130; CN 97101880 A 19970201; DE 69723597 T 19970130; JP 1789196 A 19960202; US 79113897 A 19970130